AMENDMENT OF SOLICITATI	ON/MODIFICATI	ON OF CONTRACT	1. Contract		Page 1 Of 8						
2. Amendment/Modification No.	3. Effective Date	4. Requisition/Purchase Re	equisition/Purchase Req No. 5. Project No. (If applicable)								
P00013	2004JUN08	SEE SCHEDULE									
6. Issued By	Code W56HZV	7. Administered By (If other	er than Item 6)		Code S2305A						
TACOM WARREN BLDG 231 SFAE-CSS-LAV ANGELA VENDITTELLI (586)574-8359 WARREN, MICHIGAN 48397-5000		DCMA DETROIT U.S. ARMY TANK & A (TACOM) ATTN: DCMAE-GJD	UTOMOTIVE COMM	IAND							
HTTP://CONTRACTING.TACOM.ARMY.MIL EMAIL: VENDITTA@TACOM.ARMY.MIL		WARREN, MI 48397-	5000								
		SCD C	PAS NONE		' HQ0337						
8. Name And Address Of Contractor (No., Stre	et, City, County, State and	1 Zip Code)	9A. Amendme	nt Of Solicitation I	No.						
AV TECHNOLOGY LLC 14920 23 MILE RD UTICA, MI. 48315-3008			9B. Dated (See	e Item 11)							
		X	10A. Modifica	tion Of Contract/C	Order No.						
MADE DIGINEGO, Laura Duainasa Danfa	i i II G		DAAE07-00-C-	-M064							
TYPE BUSINESS: Large Business Perfo	rilling in U.S.		10B. Dated (So	ee Item 13)							
1 0	HIS ITEM ONLY APPLI	ES TO AMENDMENTS OF	1	NS							
The above numbered solicitation is amend	led as set forth in item 14.	The hour and date specified	for receipt of Of	fers							
is extended, is not extended.			<b>-</b>								
Offers must acknowledge receipt of this amo											
(a) By completing items 8 and 15, and return offer submitted; or (c) By separate letter or		of the amendments: (b) By ac reference to the solicitation :									
ACKNOWLEDGMENT TO BE RECEIVED	D AT THE PLACE DESIG	SNATED FOR THE RECEI	T OF OFFERS	PRIOR TO THE H	IOUR AND DATE						
SPECIFIED MAY RESULT IN REJECTION change may be made by telegram or letter, p											
opening hour and date specified.				,	F						
12. Accounting And Appropriation Data (If required) NO CHANGE TO OBLIGATION DATA											
	ITEM ONI V ADDI IEC T	O MODIFICATIONS OF C	ONTD A CTS/OD	DEDC							
KIND MOD CODE: G		act/Order No. As Described 1		DEKS							
A. This Change Order is Issued Pursua The Contract/Order No. In Item 10.	<b>A</b> .				n Item 14 Are Made In						
B. The Above Numbered Contract/Orde Set Forth In Item 14, Pursuant To T			such as changes	in paying office, ap	opropriation data, etc.)						
X C. This Supplemental Agreement Is En	ered Into Pursuant To Au	thority Of: Mutual Agreem	ent								
D. Other (Specify type of modification a	and authority)										
E. IMPORTANT: Contractor x is not,	is required to sign	this document and return _		copies to the Issuin	g Office.						
14. Description Of Amendment/Modification (	Organized by UCF section	headings, including solicitat	on/contract subj	ect matter where fe	easible.)						
SEE SECOND PAGE FOR DESCRIPTION											
Except as provided herein, all terms and condi and effect.	tions of the document refe	renced in item 9A or 10A, as	heretofore chang	ged, remains uncha	nged and in full force						
15A. Name And Title Of Signer (Type or print	)	16A. Name And Titl		Officer (Type or p	orint)						
		FINNELLM@TACOM.		574-8361							
15B. Contractor/Offeror	15C. Date Signed	16B. United States (	of America		16C. Date Signed						
	_	By	/SIGNED/		2004JUN08						
(Signature of person authorized to sign)		(Signature	of Contracting (	Officer)							

#### Reference No. of Document Being Continued

PIIN/SIIN DAAE07-00-C-M064

MOD/AMD P00013

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Name of Offeror or Contractor: AV TECHNOLOGY LLC

SECTION A - SUPPLEMENTAL INFORMATION

- 1. The purpose of this modification P00013 is to decrease the hours and funding on Work Directive 011 (LAV-AD Engineering Baseline Study) and to add Work Directive 012, Amendment 1 (LAV-AD Convert Technical Drawings to ECards System). This modification also updates CLIN 006AA to reflect the current PRON amendment. The paragraphs below provide a summary of the changes to this contract.
- 2. CLIN 0005AA is modified to add Work Directive 012, Amendment 1 (LAV-AD Convert Technical Drawings to ECards System).
- 3. CLIN 0006AA is modified to reflect the current Amendment number 02 for PRON T122T3354K. The amendment is updated from 01 to 02. There is not change to the contract CLIN price.
- 4. Section H.1.2 (Available and Authorized Hours (Option Year 1)), was modified to decrease the number of hours listed under Work Directive 011 by 33, from 600 to 567.
- 5. Section H.1.2 was also modified include the 33 hours that are added under Work Directive 012, Amendment 1. These 33 hours were moved from Work Directive 011.
- 6. Attachment 1, the listing of Work Directives, is modified to add Work Directive 012, Amendment 1 (LAV-AD Convert Technical Drawings to ECards System.
- 7. Work Directive 011 is modified to decrease the hours by 33, from 600 to 567. The funding for the labor is decreased by \$3,145.89, from \$57,197.99 to \$54,052.10. The total Work Directive is decreased by \$3,145.89, from \$59,197.99 to \$56,052.10. The 33 hours and \$3,145.89 in funding were moved from Work Directive 011 to Work Directive 012, Amendment 1.
- 8. Work Directive 012, Amendment 1, is added to include additional funding for effort of Converting Technical Drawings to the ECards System. Work Directive 012, Amd 1 is issued for 33 hours and \$3,145.89.
- 9. As a result of this modification P00013, there is no change to the total dollar value of the contract. The contract value remains at \$697,178.90.
- 10. All other terms and condition remain unchanged and in full force.

\*\*\* END OF NARRATIVE A 013 \*\*\*

DLVR SCH

REL CD

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#### Reference No. of Document Being Continued

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ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
	SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS				
	DECITOR B SOFFEIED OR SERVICES AND PRICES/COSTS				
0005AA	SERVICES LINE ITEM				\$65,013.12
	NOUN: LAV-AD STS; GDLS-CSSC				
	PRON: T122T5414K PRON AMD: 02 ACRN: AE				
	CUSTOMER ORDER NO: M9545002MPR2AJ4				
				*	Est Cost: \$59,646.
				*	
				*	TOTAL:: \$65,013
	The contractor shall provide the supplies and *				
	services necessary to perform the efforts * specified in Section C, Statement of Work and *				
	executed:				
	Work Directive Number 011, (LAV-AD Engineering *				
	Baseline Study) *				
	Work Directive Number 013 (Design Integration of the LAV-AD Wind Speed	*			
	Sensor)	*			
	Work Directive Number 012, Amd 1 (LAV-AD *				
	Convert Technical	*			
	Drawings to ECard System)	*			
	t gray coops				
	* CLIN 0005A was added by Modification by Modification P00010.				
	* WD 012, Amd 1, was added by Modification P00013.				
	Modification 100013.				
	(End of narrative B001)				
	Inspection and Acceptance				
	INSPECTION: Destination ACCEPTANCE: Destination				
	Deliveries or Performance				

PERF COMPL

\_\_\_DATE\_\_\_

29-MAR-2003

\_\_\_QUANTITY\_\_\_

0

\$ 65,013.12

### Reference No. of Document Being Continued

PIIN/SIIN DAAE07-00-C-M064

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Name of Offeror or Contractor: AV TECHNOLOGY LLC

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0006AA	SERVICES LINE ITEM				\$ 21,925.90
	CLIN CONTRACT TYPE:				
	Cost-Plus-Fixed-Fee				
	NOUN: LAV-AD STS PRON: T122T3354K PRON AMD: 02 ACRN: AF				
	CUSTOMER ORDER NO: M9545002MP22016				
					H-t Gt : 620 116
					Est Cost: \$20,116 Fixed Fee: \$ 1,809
				*	TOTAL:: \$21,925
	The contractor shall provide the supplies and				
	services necessary to perform the efforts				
	specified in Section C, Statement of Work and executed:				
	Work Directive Number 012, (LAV-AD Convert	†			
	Technical Data to ECards System)	<b>*</b>			
	System)				
	* CLIN 0006AA was added by Modification P00010.				
	* Modification P00013 updates PRON T122T2254K				
	from PRON AMD: 01 to PRON AMD: 02 (no change				
	in CLIN Amount).				
	(End of narrative B001)				
	Inspection and Acceptance				
	INSPECTION: Destination ACCEPTANCE: Destination				

#### Reference No. of Document Being Continued

PIIN/SIIN DAAE07-00-C-M064

MOD/AMD P00013

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Name of Offeror or Contractor: AV TECHNOLOGY LLC

SECTION H - SPECIAL CONTRACT REQUIREMENTS

H.1 Level of Effort and Options. This contract is a cost plus fixed fee (level of effort) (CPFF(LOE)) type of contract. The base year for this contract is the period 7 September 2000 through 30 September 2001. The succeeding four twelve month periods are, respectively, option years one, two, three and four, and will expire on 6 September of the respective option year. The Contracting Officer may unilaterally issue work directives up to a cumulative total of 3,671 hours during the base year and up to an additional cumulative total of 625 hours in each of the successive option years, with the exception of Option Year One and Option Year Two. Option Year One has been increased to 1,927 hours. Option Year Two has been increased to 4,532. The Contracting Officer may issue work directives against an option year level of effort prior to the beginning of the option year, but the right to issue work directives against the base year level of effort and against the option year levels of effort expires as of the end of the base year and option years respectively. The composite direct labor rate for the base year, for WD 001, WD 002, and WD 003, is \$157.55 (\$144.52 estimated cost and \$13.03 fixed fee). In accordance with H.3, the redetermined composite direct labor rate of \$95.33 (\$87.46 estimated cost and \$7.87 fixed fee) will be used for Work Directives issued during the base year and after issuance of WD 003.

The mark ups for material and ODC costs for the base year are as set forth in H.2. The composite direct labor rates and material and ODC mark ups for the four option years shall be established by mutual agreement after the U. S. Army's Interim Armored Vehicle (IAV) contract is awarded or, if the Army decides to terminate the IAV procurement, after the procurement is terminated. Work directives may be issued for hours of the following labor categories:

Field Representative Services (FRS)

Technical Inquiries

Software Engineering

Hardware Engineering

Parts Obsolence Management

Training

Product Quality Deficiency Report Investigation

Technical Manual (TM)/Provisioning Updates

H.1.1 Available and Authorized Hours. The number of hours available for use during the base year is 3,671. The following hours have been authorized for expenditure:

Available Hours:		3,671
Authorized Hours:		
Work Directive 001 (	CLIN 0001AA)	54
Work Directive 002 (	CLIN 0001AA)	1,380
Work Directive 003 (	CLIN 0002AA)	411
Work Directive 004 (0	CLIN 0003AA)	46
Work Directive 005 (0	CLIN 0003AA)	1,380
Work Directive 006 (0	CLIN 0003AA)	60
Work Directive 007 (0	CLIN 0003AA)	340
REMAINING HOURS:		-0-

H.1.2 Available and Authorized Hours (Option Year 1). The number of hours available for use during Option Year 1 is 1,927. The following hours have been authorized for expenditure:

Available Hours:	1,927	
Authorized Hours:		
Work Directive 001, Amendment 1 (CLIN 0004AA)	9	
Work Directive 002, Amendment 1 (CLIN 0004AA	60	
Work Directive 004, Amendment 1 (CLIN 0004AA)	100	
Work Directive 006, Amendment 1 (CLIN 0004AA)	60	
Work Directive 008 (CLIN 0004AA)	80	
Work Directive 009 (CLIN 0004AA)	120	
Work Directive 010 (CLIN 0004AA)	607	
Work Directive 011 (CLIN 0005AA)	567	*
Work Directive 012 (CLIN 0006AA)	230	
Work Directive 012, Amendment 1 (CLIN 0005AA)	33	*
Work Directive 013 (CLIN 0005AA)	61	
REMAINING HOURS:	- 0 -	

<sup>\*</sup> Changed by Modification P00013 (decreased WD 011 by 33 hour (from 600 to 567), added WD 012, Amd 001 (33 hrs)).

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Name of Offeror or Contractor: AV TECHNOLOGY LLC

H.1.3 Available and Authroized Hours (Option Year 2). The number of hours available for use during Option Year 2 is 4,532. The following hours have been authorized for expenditure:

Available Hours: 4,532 \*
Authorized Hours: 0 \*
REMAINING HOURS: 4,532 \*

- H.2 Pricing Material and Other Direct Cost (ODC). As it is not currently possible to estimate the need to incur material and/or discretely estimated ODC costs in connection with future work directives and TACOM policy is not to "bulk fund" such expenses, if any future work directives cause the Contractor to incur costs for materials and/or ODC, the base year price for the material and/or ODC shall be determined in accordance with the following procedures. When the Contracting Officer issues a work directive that requires the Contractor to incur costs for materials and/or ODC and the Contracting Officer and the Contractor have agreed on the Contractor's estimated out-of-pocket cost for the material and/or ODC, then the price for the material and ODC shall be calculated as follows:
- H.2.1 Applicable to Work Directives WD 001, WD 002, and WD 003, for material, the Contractor's estimated out-of-pocket cost shall be marked up by 21.10 percent (21.10%) for material overhead and G&A expense to establish the estimated cost of the material. In accordance with H.3, the redetermined Material Overhead and G&A expense is 9.88 percent (9.88%) and will be used for Work Directives issued during the base year and after issuance of WD 003. The estimated cost of the material shall be marked up by a further 9 percent (9%) fixed fee.
- H.2.2 For ODC, applicable to WD 001, WD 002 and WD 003, the Contractor's estimated out-of-pocket cost shall be marked up by 14.01 percent (14.01%) for G&A expense to establish the estimated cost of the ODC. In accordance with H.3, the redetermined G&A expense to establish the estimated cost of the ODC is 4.73 percent (4.73%) and will be used for Work Directives issued during the base year and after issuance of WD 003. The estimated cost of the ODC shall be marked up by a further 9 percent (9%) fixed fee.
- H.2.3 For both material and ODC, the contract shall be modified to increase the total contract estimated cost and the total contract fixed fee by the amounts of the material and/or ODC estimated cost and fixed fee respectively.
- H.2.4 For material and ODC costs associated with option year work directives, the methodology to calculate the price shall be as set forth above, but the material overhead and G&A mark up rates for the applicable option years set forth in H.1 shall be used to calculate the prices (the fixed fee rate shall remain 9%).
- H.2.4.1 For Option Year 1, the following rates shall be used:

Composite Direct Labor Rate: \$95.33 (\$87.46 estimated cost and \$7.87 fixed fee)

Material Overhead and G&A Expense: 9.88 Percent (9.88%)

ODC G&A : 4.73 Percent (4.73% )

- H.3 Price Redetermination. The Contractor is one of the competitors for the U. S. Army's Interim Armored Vehicle (IAV) program. The business base assumptions used to establish the composite labor rate and the material and ODC mark ups do not include IAV in the Contractor's business base. Because award of a contract for an IAV family of vehicles based on the Pandur 6x6 armored wheeled vehicle to General Dynamics will have a significant impact on the Contractor's projected business base, the Government and the Contractor shall redetermine the composite labor rate and material and ODC mark ups applicable to this contract after an IAV contract is awarded or after the U. S. Army terminates the IAV program.
- H.3.1 Modification P00003 establishes the redetermined rates, as listed above in H.1, H2.1, and H.2.2.
- H.4 AV Technology has been renamed to General Dynamics Customer Support and Services (CSSC). There is a possibility that CSSC may be absorbed into General Dynamics Land Systems (GDLS). If it occurs, there will be an impact on the rates and the Government and the Contractor shall redetermine the composite labor rate and material and ODC Mark ups applicable to this contract.

CONTINUATION SHEET	Reference No. of Document Bei	Page 7 of 8	
CONTINUATION SHEET	PIIN/SIIN DAAE07-00-C-M064	MOD/AMD P00013	

Name of Offeror or Contractor: AV TECHNOLOGY LLC

CONTI	NII A TION CHEET	Reference No. of Document Be	Page 8 of 8	
CONTI	NUATION SHEET	PHN/SHN DAAE07-00-C-M064	MOD/AMD P000	13
Name of Offeror	or Contractor: AV TECHNOLO	OGY LLC		·
SECTION J - LIST	OF ATTACHMENTS			
List of Addenda		Title		umber Pages Transmitted By
Attachment 001	WORK DIRECTIVES	TILIE		

PAGE 1

#### $\tt 020b0604020202020204 \ \ 020b0604020202020204 \ \ 020b0604020202020204 \ \ 020b0604020202020204$

#### WORK DIRECTIVES

WORK DIRECTIVE 001	LAV-AD Technical Meetings (STOP WORK)
WORK DIRECTIVE 001, AMD 1	LAV-AD Technical Meetings (additional hours) (STOP WORK)
WORK DIRECTIVE 002	LAV-AD Operator and Maintenance Training (STOP WORK)
WORK DIRECTIVE 002, AMD 1	LAV-AD Operator and Maintenance Training (additional hours) (STOP WORK)
WORK DIRECTIVE 003	LAV-AD Product Quality Deficiency Report (PQDR) Investigation (STOP WORK)
	a. LAV-AD Gunner's Position Window (CLOSED)
MODE DEDUCTIVE 004	TANK AD TRANSPORT MANAGEMENT (OTTOD MODY)
WORK DIRECTIVE 004	LAV-AD Technical Meetings (STOP WORK)
WORK DIRECTIVE 004, AMD 1	LAV-AD Technical Meetings (additional hours) (STOP WORK)
WORK DIRECTIVE 005	LAV-AD Operator and Maintenance Training (ON HOLD/STOP WORK)
WORK DIRECTIVE 006	Program Management
WORK DIRECTIVE 006, AMD 1	Program Management (additional hours)
WORK DIRECTIVE 007	LAV-AD Ground Clearance (STOP WORK)
WORK DIRECTIVE 008	Logic Card Repair (ON HOLD/STOP WORK)
WORK DIRECTIVE 009	Program Management - Engineering (STOP WORK)
WORK DIRECTIVE 010	LAV-AD Operator and Maintenance Training Program of Instruction (POI)
	and Lesson Plan (STOP WORK)
WORK DIRECTIVE 011	LAV-AD Engineering Baseline Study (STOP WORK)
WORK DIRECTIVE 012	LAV-AD Convert Technical Drawings to ECards System (STOP WORK)
WORK DIRECTIVE 012, AMD 1	LAV-AD Convert Technical Drawings to ECards System (additional hours) (STOP WORK) *
WORK DIRECTIVE 013	Design the Integration of the LAV-AD Wind Speed Sensor (STOP WORK)

<sup>\*</sup> Added by Modification P00013

# SYSTEM TECHNICAL SUPPORT WORK DIRECTIVE NUMBER 001

STOP	WORK	ON	THIS	WORK	DIR	ECTIVE	PUI	RSUANT	TO	FAR	52.	242-15	ALT	I,	PER	PCO I	LETTE	R D	DATED	DECE	MBER	19,	2002	AND	MODI	FIC	ATION	P00012.	*
NO	FURTHE	ER V	VORK	SHALI	BE	PERFOR	RMED	UNDER	THI	s wo	ORK	DIRECT	IVE,	UNT	IL N	OTIF	IED I	N W	RITIN	G BY	THE	CONF	RACTI	NG OI	FFICE	R T	0 D0		*
OTHE	RWISE.	*																											

SUBJECT: LAV-AD, Technica	al Meetings	
SCOPE OF WORK:		
in accordance with CLIN 00	001AA, C.2 and CDRL A001	work meeting and one (1) additional technical review/meeting of the contract. Successful completion of the meetings minutes.
DIRECT LABOR :		
CATEGORY	HOURS:	COST:
Technical Inquiries	54	\$8,507.70
OTHER DIRECT COSTS:		
CATEGORY:		COST:
Meeting Preparation		\$0.00
Presentation Materials		\$0.00
TOTAL AMOUNT OF WORK DIREC	TIVE:	\$8,507.70
CONTRACTING OFFICER	/S/ Michael T. Finnell	DATE4 Sep 02
CONTRACTOR ACKNOWLEDGEMENT		DATE
* Modified by P00012.		

CONTRACT NO. : DAAE07-00-C-M064

DATE: See date below at Contracting Officer's Signature.

PIIN/SIIN DAAE07-00-C-M064 MOD/AMD P00013 ATT/EXH ID PAGE 3

#### SYSTEM TECHNICAL SUPPORT WORK DIRECTIVE NUMBER 001, Amendment 1

STOP WORK ON THIS WORK DIRECTIVE PURSUANT TO FAR 52.242-15 ALT I, PER PCO LETTER DATED DECEMBER 19, 2002 AND MODIFICATION P00012. \* NO FURTHER WORK SHALL BE PERFORMED UNDER THIS WORK DIRECTIVE, UNTIL NOTIFIED IN WRITING BY THE CONRACTING OFFICER TO DO

OTHERWISE. CONTRACT NO. : DAAE07-00-C-M064 DATE: See date below at Contracting Officer's Signature. SUBJECT: LAV-AD, Technical Meetings SCOPE OF WORK: This WD 001, Amendment 1, adds 9 hours IAW CLIN 0004AA, C.2 and CDRL1. The hours shall be used to cover the Start Of Work Meeting and 1 additional Meeting/Review as stated in WD 001. Successful completion of the aforementioned meetings shall be based upon Government receipt of final agendas and meeting minutes. DIRECT LABOR : CATEGORY HOURS: COST: Technical Inquiries \$857.97 OTHER DIRECT COSTS: CATEGORY: COST: Meeting Preparation \$0.00 \$0.00 Presentation Materials TOTAL AMOUNT OF WORK DIRECTIVE: \$857.97 CONTRACTING OFFICER \_\_\_/s/ Michael T. Finnell\_\_\_\_\_ DATE \_\_\_4 Sep 02\_

\_ DATE\_\_

\* Added by P00012.

CONTRACTOR ACKNOWLEDGEMENT \_\_\_

## SYSTEM TECHNICAL SUPPORT WORK DIRECTIVE NUMBER 002

STOP WORK ON THIS WORK DIRECTIVE PURSUANT TO FAR 52.242-15 ALT I, PER PCO LETTER DATED DECEMBER 19, 2002 AND MODIFICATION P00012. \*

NO FURTHER WORK SHALL BE PERFORMED UNDER THIS WORK DIRECTIVE, UNTIL NOTIFIED IN WRITING BY THE CONRACTING OFFICER TO DO \*

OTHERWISE.

\*

CONTRACT NO. : DAAE07-00-C-M064

DATE: See date at Contracting Officer's Signature.

SUBJECT: LAV-AD Operator and Maintenance Training

SCOPE OF WORK:

The Contractor shall conduct a start of work meeting in accordance with CLIN 0001AA, C.2 and CDRL A001 of the contract.

The Contractor shall conduct operator and maintenance training classes in accordance with (IAW) paragraph C.3, Training Support. The Contractor shall perform four (4) Turret Operator and First Echelon Maintenance Training classes IAW paragraph C.3.2.3. The first class will start on approximately Jan 8, 2001, and the remaining three classes will start on approximately the following dates:

Class 2 - Apr 23, 2001 Class 3 - Jul 23, 2001 Class 4 - Jan 28, 2002

The Contractor shall additionally perform four (4) Turret Second and Third Echelon Maintenance Training classes IAW paragraph C.3.2.4.

The first class will start approximately Jan 11, 2001,

and the three remaining classes will start approximately the following dates:

and the three remaining classes will start on  $% \left( 1\right) =\left( 1\right) +\left( 1$ 

Class 2 - NLT Apr 26, 2001 Class 3 - NLT Jul 26, 2001 Class 4 - NLT Jan 31, 2002

Successful completion of the aforementioned tasks shall be based upon the following criteria:

Training cover the number of hours stated in the contract
Training cover the topics specified in the contract

Students received handout training materials as specified in the contract

DIRECT LABOR :

CATEGORY HOURS: COST:

Training 1,380 \$217,419.00

OTHER DIRECT COSTS:

CATEGORY: COST:
Travel \$18,000.00
Training Material \$1,073.29
Training Preparation (GDAS SPT) \$4,000.00

TOTAL AMOUNT OF WORK DIRECTIVE: \$240,492.29

CONTRACTING OFFICER \_\_/s/ Michael T. Finnell\_\_\_\_\_ DATE \_\_\_4 Sep 02\_\_\_\_\_

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ATT/EXH ID	
PAGE	5

CONTRACTOR	DATE	

\* Changed by Modification P00012

# SYSTEM TECHNICAL SUPPORT WORK DIRECTIVE NUMBER 002, Amendment 1

STOP	WORK	ON	THIS	WORK	DIRE	CTIVE	PURS	SUANT	TO FAR	₹ 52.	242-15	ALT	I,	PER	PCO I	LETTER	DATE	D DE	CEMB:	ER 1	.9,2	002	AND	MODIFI	CATIC	N P	00012.	*
NO	FURTH	HER	WORK	SHAL	L BE	PERFO	RMED	UNDER	THIS	WORK	DIREC	TIVE	, UN	NTIL	NOTI	FIED I	N WRI	TING	BY '	THE	CONR.	ACTI	NG C	FFICER	TO D	0	,	*
OTHE	RWISE.																											

\*

CONTRACT NO. : DAAE07-(DATE: See date at Contra	00-C-M064 acting Officer's Signature.		
SUBJECT: LAV-AD Operator	r and Maintenance Training		
This Work Directive 002, the same and shall be met		O WD 002, IAW CLIN 0004AA, C.2, CDRL A001.	. All other requirmentsin WD 002 rem
DIRECT LABOR :			
CATEGORY	HOURS:	COST:	
Training	60	\$5,719.80	
OTHER DIRECT COSTS:			
CATEGORY:		COST:	
Travel		0-	
Training Material		-0-	
Traing Preparation (GDAS	SPT)		-0-
TOTAL AMOUNT OF WORK DIRE	ECTIVE: \$5,7	19.80	
CONTRACTING OFFICER	/s/ Michael T. Finnell	_ DATE4 Sep 02	
CONTED & CITIOD	DA	777	

\* Changed by Modification P00012

## SYSTEM TECHNICAL SUPPORT WORK DIRECTIVE NUMBER 003

STOP WORK ON THIS WORK DIRECTIVE PURSUANT TO FAR 52.242-15 ALT I, PER PCO LETTER DATED DECEMBER 19, 2002 AND MODIFICATION P00012. \*

NO FURTHER WORK SHALL BE PERFORMED UNDER THIS WORK DIRECTIVE, UNTIL NOTIFIED IN WRITING BY THE CONRACTING OFFICER TO DO \*

\*

CONTRACT NO. : DAAE07-00-C-M064

DATE: See date below at Contracting Officer's Signature

SUBJECT: LAV-AD Product Quality Deficiency Report (PQDR) Investigation

SCOPE OF WORK:

The Contractor shall investigate PQDRs in accordance with CLIN 0002AA, C.5 and CDRL A004 of the contract.

DIRECT LABOR :

CATEGORY HOURS: COST:

PQDR Investigation 411 \$64,753.05

OTHER DIRECT COSTS:

CATEGORY: COST:

N/A

TOTAL AMOUNT OF WORK DIRECTIVE: \$64,753.05

LIST OF PQDRs:

a. LAV-AD Gunner's Position Window (CLOSED) \*

Statement of Problem:

The Gunners window of the Light Armored Vehicle- Air Defense (LAV-AD) turret is fogging. Also, it appears that some of the layers of laminate window are separating. The fogging and laminate separation decreases visibility and compromises the ballistic integrity of the window.

Guidance:

The Contractors shall identify the cause of the fogging and separation of the laminate layers of the Gunners window. The Contractor shall propose procedures to prevent the fogging and layer separation. If a process to prevent the fogging and layer separation is not feasible the Contractor shall develop a replacement window that meets the ballistic requirements of the LAV-AD. The replacement window shall not fog or separate.

The Contractor shall supply a suitable solution for this problem, Engineering Change Proposal (ECP), a Modification Instruction (MI), and a prototype kit.

CLOSED: As of November 7, 2002, this PQDR ro the Gunner's Position Window is closed. This Work Directive is closed since the contrator was unable to proceed with the investigation \*

since it  $\,\,\,\,$  is not possible for them to gain access to proprietary data for that window.

CONTRACTING OFFICER	DATE	
CONTRACTOR		DATE

\* Modified by P00012

# SYSTEM TECHNICAL SUPPORT WORK DIRECTIVE NUMBER 004

STOP	WORK	on	THIS	WORK	DIR	ECTIVE	PUI	RSUANT	TO F	PAR	52.	242-15	ALT	I,	PER	PCO	LETTER	. DATED	DEC	EMBER	19,	2002	AND	MODIF	ICATION	P00012.	*
NO	FURTHE	ER V	VORK	SHALI	BE	PERFO	RMED	UNDER	THIS	S WO	RK	DIRECT	IVE,	UNT	TIL 1	OTIF	FIED IN	WRITI	NG B	THE	CONE	RACTI	IG OI	FFICER	TO DO	*	
OTHE	RWISE.																										

\*

CONTRACT NO. : DAAE07-00-C-M064 DATE: See date below at Contract		
SUBJECT: LAV-AD, Technical Meeting	ngs	
SCOPE OF WORK:		
_	_	ccordance with CLIN 0003AA, C.2 and CDRL A001 of the contract. cased upon Government receipt of final agendas and meeting minutes.
DIRECT LABOR :		
CATEGORY Technical Inquiries	HOURS:	COST: \$4,385.18
OTHER DIRECT COSTS:		
CATEGORY: N/A	COST:	N/A
TOTAL AMOUNT OF WORK DIRECTIVE:	\$4,385.18	
CONTRACTING OFFICER	DATE :	

CONTRACTOR \_\_\_\_\_ DATE \_\_\_\_

<sup>\*</sup> Added by Modification P00012

PIIN/SIIN DAAE07-00-C-M064 MOD/AMD P00013 ATT/EXH ID PAGE 10

#### SYSTEM TECHNICAL SUPPORT WORK DIRECTIVE NUMBER 004 , Amendment 1

STOP WORK ON THIS WORK DIRECTIVE PURSUANT TO FAR 52.242-15 ALT I, PER PCO LETTER DATED DECEMBER 19, 2002 AND MODIFICATION P00012. \* NO FURTHER WORK SHALL BE PERFORMED UNDER THIS WORK DIRECTIVE, UNTIL NOTIFIED IN WRITING BY THE CONRACTING OFFICER TO DO

CONTRACT NO. : DAAE07-00-C-M064

DATE: See date below at Contracting Officer's Signature.

CONTRACTOR \_\_\_\_\_ DATE \_\_\_\_

SUBJECT: LAV-AD, Technical Meeting	ngs		
SCOPE OF WORK:			
the up to 7 technical reviews/meet			he hours shall be used to cover the technical reviews/meetings shall be
DIRECT LABOR : CATEGORY Technical Inquiries	HOURS:	COST: \$9,533.00	
OTHER DIRECT COSTS: CATEGORY: N/A	COST:	N/A	
TOTAL AMOUNT OF WORK DIRECTIVE:	\$9,533.00		
CONTRACTING OFFICER _Michael T. F:	innell /Signed\	DATE _5/3/02	

\* Added by Modification P00012.

## SYSTEM TECHNICAL SUPPORT WORK DIRECTIVE NUMBER 005

THIS WORK DIRECTIVE 005 IS PLACED ON HOLD (STOP WORK) AS OF THE CONTRACTING OFFICER LETTER DATED MARCH 28, 2002 AND PER MODIFICATION P00009.

INADDITION TO THE HOLD PLACED ON MARCH 28, 2002, A STOP WORK ON THIS WORK DIRECTIVE WAS ISSUED PURSUANT TO FAR 52.242-15

ALT I, PER PCO LETTER DATED DECEMBER 19, 2002 AND MODIFICATION P00012. NO FURTHER WORK SHALL BE PERFORMED UNDER THIS \*

WORK DIRECTIVE, UNTIL NOTIFIED IN WRITING BY THE CONRACTING OFFICER TO DO OTHERWISE.

CONTRACT NO. : DAAE07-00-C-M064

DATE: See date below at Contracting Officer's Signature

SUBJECT: LAV-AD Operator and Maintenance Training

SCOPE OF WORK:

The Contractor shall conduct a start of work meeting in accordance with CLIN 0003AA, C.2 and CDRL A001 of the contract.

The Contractor shall conduct operator and maintenance training classes in accordance with (IAW) paragraph C.3, Training Support. The Contractor shall perform four (4) Turret Operator and First Echelon Maintenance Training classes IAW paragraph C.3.2.3. The classes will start on approximately the following dates:

Class 1 - Nov 5, 2001 Class 2 - Feb 4, 2002 Class 3 - May 6, 2002 Class 4 - Aug 5, 2002

The Contractor shall additionally perform four (4) Turret Second and Third Echelon Maintenance Training classes IAW paragraph C.3.2.4. The classes will start on approximately the following dates:

Class 1 - NLT Nov 8, 2001 Class 2 - NLT Feb 7, 2002 Class 3 - NLT May 9, 2002 Class 4 - NLT Aug 8, 2002

Successful completion of the aforementioned tasks shall be based upon the following criteria:

Training cover the number of hours stated in the contract

Training cover the topics specified in the contract

Students received handout training materials as specified in the contract

DIRECT LABOR :

CATEGORY HOURS: COST:

Training 1,380 \$131,555.40

OTHER DIRECT COSTS:

CATEGORY: COST:

Travel \$18,000.00

Training Material \$ 1,073.29

Training Preparation (GDAS SPT) \$ 4,000.00

Subtotal ODC \$23,073.29

TOTAL AMOUNT OF WORK DIRECTIVE: \$154,628.69

CONTRACTING	OFFICER	DA	ΓE
CONTRACTOR _		DA	ΓE

 $\star$  Changed by Modification P00012.

# SYSTEM TECHNICAL SUPPORT WORK DIRECTIVE NUMBER 006

DATE: See date below at Contrac		re.	
SUBJECT: LAV-AD, Program Manage	ment		
SCOPE OF WORK:			
The Contractor shall assign a Pr directives.	ogram Manager (CLIN 000	3AA) for this contra	ct. The Program Manager's duties will cover all work
This Work Directive shall cover *	the Financial Reporting	g fo the Performance a	nd Cost Reports IAW C.8.8 and CDRL A005.
DIRECT LABOR :			
CATEGORY Program Management	HOURS: 60	COST:	\$5,719.80
OTHER DIRECT COSTS: CATEGORY: N/A		COST:	N/A
TOTAL AMOUNT OF WORK DIRECTIVE:	\$5,	719.80	

CONTRACTOR \_\_\_

CONTRACTING OFFICER \_\_\_\_\_ DATE \_\_\_\_

\_\_\_\_\_ DATE \_\_\_\_\_

<sup>\*</sup> Added by Modification P00010.

# SYSTEM TECHNICAL SUPPORT WORK DIRECTIVE NUMBER 006, Amendment 1

CONTRACT NO. : DAAE07-00-C-M064

SUBJECT: LAV-AD, Program Management

\* Added by Modification P00010.

DATE: See date below at Contracting Officer's Signature.

SCOPE OF WORK:						
This Work Directive Number 006, A	·				for the	Program
This Work Directive shall cover *	the Financial Repor	rting of the Performance	and Cost Report	s IAW C.8.8 and CDRL A005.		
DIRECT LABOR : CATEGORY	HOURS:	COST:				
Program Management	60		\$5,719.80			
OTHER DIRECT COSTS: CATEGORY: N/A		COST:	N/A			
TOTAL AMOUNT OF WORK DIRECTIVE:		\$5,719.80				
CONTRACTING OFFICERMichael T.	Finnell /SIGNED\_	DATE: 5/3/02				
CONTRACTOR		_ DATE				

## SYSTEM TECHNICAL SUPPORT WORK DIRECTIVE NUMBER 007

STOP WORK ON THIS WORK DIRECTIVE AS OF THE CONTRACT DATE OF MODIFICATION P000010. NO FURTHER WORK SHALL BE PERFOMED UNDER THIS WORK DIRECTIVE 007, UNTIL NOTIFIED IN WRITING BY THE CONTRACTING OFFICER TO DO OTHERWISE.

\*
P00012. STOP WORK ON THIS WORK DIRECTIVE PURSUANT TO FAR 52.242-15 ALT I, PER PCO LETTER DATED DECEMBER 19, 2002 AND MODIFICATION
\*

INADDITION TO THE STOP WORK ISSUED AS OF THE CONTRACT DATE OF MODIFICATION P00010, A STOP WORK HAS BEEN ISSUED PER MODIFICATION

P00012. NO FURTHER WORK SHALL BE PERFORMED UNDER THIS WORK DIRECTIVE, UNTIL NOTIFIED IN WRITING BY THE CONRACTING OFFICER TO DO \*

\*

CONTRACT NO. : DAAE07-00-C-M064

DATE: See date below at Contracting Officer's Signature.

SUBJECT: LAV-AD, Ground Clearance

SCOPE OF WORK:

The Contractor shall begin the investigation of the LAV-AD Ground Clearance issue with the hours/ODCs under this Work Directive. If additional funds become available, another Work Directive may be issued to fund additional work. This Work Directive Number 007 shall be performed under CLIN 0003AA.

Statement of Problem:

The Family of Light Armored Vehicles (FOLAV), while combat loaded, has an operational requirement to negotiate a vertical step of at

least 19.5-inches. The vehicles must be able to traverse this obstacle while traveling in the forward direction and the in the reverse direction. No damage to the vehicle is allowed. The LAV-Air Defense (LAV-AD) ground clearance is approximately 17.25-inches. This discrepancy was noted during the Developmental Testing (DT) phase with a Test Incident Report (TIR).

In addition to the vertical step requirement the FOLAV must be deployable on Landing Craft Air Cushion (LCAC). Each FOLAV variant, while loaded to combat weight, must be capable of rolling on and off of the LCAC. The LAV-AD cannot roll on or roll off of the LCAC while loaded to combat weight. The rear axle/skid plate make contact with the LCAC ramp while rolling on and off of the LCAC.

Background of Interim Solution (Short Term Temporary Solution):

The ride height/ground clearance can be improved to 18.5-inches by using the Saudi Arabian Nation Guard (SANG) version torsion bars. Although this is a considerable gain in ground clearance it is not sufficient for negotiating the vertical step obstacle. If the SANG torsion bar is indexed one tooth (9 degrees) the ground clearance is increased to 19.5-inches to 20.25-inches. This height increase will allow the LAV-AD to meet of the ground clearance requirements, but the usable life of the torsion will be greatly reduced. Estimates of torsion bar life spans (not indexed) are around 20,000 miles, while the indexed torsion bars are expected to last only 3,000 miles. This high rate of usage in unacceptable.

Requirement (Long Term Solution):

The Contractor shall develop a permanent solution to the ground clearance problem of the LAV-AD. The desired ground clearance must be at least enough to allow the LAV-AD to negotiate a 19.5-inch high obstacle in the forward and reverse directions. Also, the LAV-AD, while combat loaded, must be capable of rolling on to and off of a LCAC without making contact with the LCAC.

The Contractor shall test the solution to verify that the design meets the requirements stated above. The Contractor shall notify the Contracting Officer of the test date, NLT 30 days prior to the date of test. It will be at the Government's discretion whether a PM

LAV representative will be present during testir	LAV	representative	will	be	present	during	testin
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Following successful testing, the Contractor shall develop an Engineering Change Proposal (ECP) and Modification Instructions (MI) for the LAV-AD.

DIRECT LABOR : HOURS: CATEGORY COST: \$32,412.20 Ground Clearance Issue 340 OTHER DIRECT COSTS: CATEGORY: COST: \$ 79.10 Material TOTAL AMOUNT OF WORK DIRECTIVE: \$32,491.30 CONTRACTING OFFICER \_\_\_\_\_ DATE \_\_\_ DATE \_\_\_\_ CONTRACTOR \_\_\_\_\_

<sup>\*</sup>Changed by Modification P00012.

## SYSTEM TECHNICAL SUPPORT WORK DIRECTIVE NUMBER 008

THIS WORK DIRECTIVE 008 IS PLACED ON HOLD (STOP WORK) AS OF THE CONTRACTING OFFICER LETTER DATED MARCH 28, 2002 AND PER MODIFICATION P00009.

INADDITION TO THE HOLD/STOP WORK PLACED ON MARCH 28, 2002, A STOP WORK ON THIS WORK DIRECTIVE WAS ISSUED PURSUANT TO \*
FAR 52.242-15 ALT I, PER PCO LETTER DATED DECEMBER 19, 2002 AND MODIFICATION P00012. NO FURTHER WORK SHALL BE PERFORMED
UNDER THIS WORK DIRECTIVE, UNTIL NOTIFIED IN WRITING BY THE CONRACTING OFFICER TO DO OTHERWISE.

CONTRACT NO.: DAAE07-00-C-M064

DATE: See date at Contracting Officer's Signature.

SUBJECT: Logic Card Repair

#### SCOPE OF WORK:

The contractor shall provide a recommendation for thee best process to repair the 92007AA0815 Logic Processor Card. The contractor shall include in its recommendation, the estimated cost (including labor and materials) to repair one card. This Work Directive Number 008 shall be performed under CLIN 0004AA.

DIRECT LABOR
CATEGORY: HOURS: 80 COST: \$7,626.40

OTHER DIRECT COSTS: none

TOTAL AMOUNT OF WORK DIRECTIVE: \$7,626.40

CONTRACTING OFFICER:	Date:
CONTRACTOR:	Date:

The contractor's detailed report due to PM-LAV 30 days after award of the WD.

<sup>\*</sup> Changed by Modification P00012.

## SYSTEM TECHNICAL SUPPORT WORK DIRECTIVE NUMBER 009

STOP WORK ON THIS WORK DIRECTIVE PURSUANT TO FAR 52.242-15 ALT I, PER PCO LETTER DATED DECEMBER 19, 2002 AND MODIFICATION P00012.\* NO FURTHER WORK SHALL BE PERFORMED UNDER THIS WORK DIRECTIVE, UNTIL NOTIFIED IN WRITING BY THE CONRACTING OFFICER TO DO \*
OTHERWISE.

CONTRACT NO.: DAAE07-00-C-M064

DATE: See date at Contracting Officer's Signature.

SUBJECT: Program Management - Engineering

SCOPE OF WORK: The Contractor shall assign a Program Management - Engineering for this contract. The Program Management - Engineer's duties will cover all work directives. This Work Directive Number 009 shall be performed under CLIN 0004AA.

DIRECT LABOR	2	HOURS:	120	COST:	\$11,439.60
OTHER DIRECT	COSTS:				none
TOTAL AMOUNT	OF WORK DIRECTIVE:				\$11,439.60
CONTRACTING	OFFICER:Michael T. Finnell	/Signed\	Date: 5/3/02		
CONTRACTOR:		Date:			

<sup>\*</sup> Added by Modification P00012.

## SYSTEM TECHNICAL SUPPORT WORK DIRECTIVE NUMBER 010

STOP WORK ON THIS WORK DIRECTIVE PURSUANT TO FAR 52.242-15 ALT I, PER PCO LETTER DATED DECEMBER 19, 2002 AND MODIFICATION P00012. NO FURTHER WORK SHALL BE PERFORMED UNDER THIS WORK DIRECTIVE, UNTIL NOTIFIED IN WRITING BY THE CONRACTING OFFICER TO DO OTHERWISE.

\*

CONTRACT NO. : DAAE07-00-C-M064

DATE: See date at Contacting Officer's Signature.

SUBJECT: LAV-AD Operator and Maintenance Training Program of Instruction (POI) and Lesson Plan

SCOPE OF WORK:

A. This Work Directive shall be performed in accordance with CLIN 0004AA, C.2, C.3 and CDRL 001.

The Contractor shall develop Program of Instructions (POI) and Lesson Plans for both the LAV-AD Operator training class and for the LAV-AD Second and Third Echelon Maintenance training class. There shall be two separate sets of POIs and Lesson Plans: one set for the Operators POI and Lesson Plan; and one set for the Maintenance POI and Lesson Plan.

The POI shall be written in the Contractors format and the Contractor may use the Government Furnished Information (GFI) POI as a guide for the format and content. The GFI POI is the MOS 1302, The Basic Combat Engineer (BCE), signed 18 Sept 01 by WE Gaskin, and it will be furnished to the Contractor within 5 working days of contract award. The POI shall include practical application experience and lessons learned and, as a minimum, shall include the following:

- 1. Title page
- 2. Record of Changes
- 3. Preface
- 4. Table of Contents
- 5. Coarse Description
- 6. Instructor Computation Worksheet
- 7. Task list
- 8. Summary of Hours
- 9. Scope of Annexes
- 10. Concept Cards
- 11. Location of learning objectives
- 12. Academic Summary
- 13. Annexes
- 14. Student Performance Evaluation
- 15. Distribution List
- B. The Contractor shall conduct a start of work meeting at their facility within 30 days after award of this work directive. The focus of the meeting shall be on content and format of the Lesson Plans and POIs. The Contractor shall notify the PCO at least 10 working days prior to the meeting and provide the date, time, and exact location of the meeting. The Contractor shall provide an agenda and minutes IAW CDRL A001.
- C. The Contractor shall submit 4 hard copies and one electronic version (in Micro Soft Word) of the draft Lesson Plan and POI for the Operator's Training class; and 4 hard copies and one electronic version (in Micro Soft Word) of the draft Lesson Plan and POI for the Maintenance Training. These drafts shall be delivered no later than 120 days after the start of work meeting.
- D. The Government will review the rough drafts of the Lesson Plans and POIs and provide comments to the Contractor within 30 days after receiving the documents.
- E. The Contractor shall incorporate the Government's comments into the final version of the POIs and Lesson Plans. The Contractor shall deliver the final version of the POIs and Lesson Plans 30 days after the receipt of the Government's comments.

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- F. The content of the Operators Training Lesson Plans and POI shall address equipment characteristics, capabilities, features, operation, locations of the components, practical application experiences and lessons learned. The following topics, as a minimum, shall be included in the POI and Lesson Plan in a logical teaching order:
- 1. Publications: What technical manuals are available and how to use them.
- 2. Introduction
- 3. Safety: Review safety warnings relative to operating the LAV-AD.
- 4. Safety Test
- 5. Master control panel operation
- 6. Switch Interconnecting box and circuit breakers
- 7. Hand controls and foot switch operation
- 8. Displays and symbology: How to read displays and what they mean
- 9. Remote Terminal Unit
- 10. Enhanced-Precision Light Weight GPS Receiver
- 11. Comprehensive Test
- 12. SINGARS Radios and Intercom System
- 13. AN/GRC-231 High Frequency Radio and KY-99 Secure Voice
- 14. MV103LAV digital compass system
- 15. LAV AD Built in test (BIT) operation
- 16. Primary and secondary weapon system principal of operation
- 17. Unit Test
- 18. Servo Systems Principles of Operation
- 19. Power distribution overview
- 20. LAV-AD Communication and Navigation Principles of Operation
- 21. Preventative Maintenance Checks and Services (PMCS)
- 22. Bore Sight Exercises
- 23. Preparation for Air Transport
- 24. GAU 12/U Gun/Stinger Safing and uploading/downloading procedures
- 25. GAU-12/U 25-MM Automatic Gun Jam Clearing Procedures
- 26. Unit Test
- 27. Introduction to Detection, Acquisition and Tracking
- 28. LAV AD live Aircraft Tracking
- 29. Final Test
- G. The content of the Maintenance Training POI and Lesson Plan shall address equipment characteristics, capabilities, features, locations of major components, practical application experiences, lessons learned and Second and Third Echelon maintenance procedures required repairing LAV-AD turret components. The LAV-AD Second and Third Echelon Maintenance POI and Lesson Plan shall include, as a minimum, the following topics in a logical teaching order:
- 1. Publications: What tech manuals are available and how to use them.
- 2 Introduction to LAW-AD
- 3. Safety: Review safety warnings relative to operating and maintaining the LAV-AD
- 4. Safety Test
- 5. Master Control Panel
- 6. Switch Interconnecting Box and Circuit Breakers
- 7. Hand Controls and Foot Switch
- 8. Displays and Symbology
- 9. Remote Terminal Unit
- 10. Enhanced-Precision Light Weight GPS Receiver
- 11. Comprehensive Test
- 12. SINCGARS Radios and Intercom System
- 13. AN/GRC-231 High Frequency Radio and KY-99 Secure Voice
- 14. MV103LAV Digital Compass System
- 15. LAV-AD Built-In-Test
- 16. NBC and Chemical Agent Detector (CAD) Systems
- 17. Unit Test
- 18. Turret Mechanical Theory of Operation
- 19. Gun and Ammunition Handling System Theory of Operation
- 20. Power Distribution System and System Interlocks
- 21. Azimuth/Elevation Servo Loops
- 22. Fire Control Sensors
- 23. Communication and Navigation Systems

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- 24. Gun Control Theory of Operation
- 25. Stinger Missile System Theory of Operation
- 26. Unit Test
- 27. Feeder Removal/Installation
- 28. 25-MM Gun, Barrels Removal/Installation
- 29. Remove/Replace and Lubrication Recoil Adapters
- 30. Removal/Installation and Disassembly/Assembly of Chuting and Sealing Brush
- 31. Exit Unit Removal/Installation
- 32. Gun Drive Removal/Installation
- 33. Pusher Assembly and Last Loop Assembly Removal/Installation
- 34. Standard Vehicle Mounted Launcher and Interface Electronics Assembly Removal/Installation
- 35. Azimuth Drive Removal/Installation
- 36. Elevation Drive Removal/Installation
- 37. Equilibrator Removal/Installation
- 38. Missile Elevation Shaft and Missile Adapter Removal/Installation
- 39. Cradle Removal/Installation
- 40. Sight system Removal/Installation
- 41. Low Level Assembly Removal/Installation and Disassembly/Assembly
- 42. Monitors and Control Panels Removal/Installation
- 43. Communication Components Removal/Installation
- 44. Comprehensive Test
- 45. Batteries Removal/Installation and Servicing
- 46. Fire Suppression, Cad, and NBC Systems Removal/Installation
- 47. MV103LAV Magnetic Compass System Removal/Installation
- 48. High Level Assembly Removal/Installation and Disassembly/Assembly
- 49. Azimuth and Elevation Resolvers Removal/Installation
- 50. DECA Removal/Installation and Disassembly/Assembly
- 51. Electrical Relay Assembly Removal/Installation
- 52. Slip Ring Removal/Installation
- 53. Fire Control Sensors Removal/Installation
- 54. Turret Miscellaneous Assemblies Removal/Installation
- 55. Turret Removal/Installation
- 56. Fuel System Maintenance
- 57. Comprehensive Test
- 58. Feeder Disassembly/Assembly
- 59. Gun Disassembly/Assembly
- 60. Exit Unit Disassembly/Assembly
- 61. Gun Drive Disassembly/Assembly
- 62. Standard Vehicle Mounted Launcher (SVML) Disassembly/Assembly
- 63. Azimuth Drive Disassembly/Assembly
- 64. Elevation Drive Disassembly/Assembly
- 65. Equilibrator Disassembly/Assembly
- 66. Troubleshooting Using Built-In-Test and System Test Points
- 67. Final Test
- H. Successful completion of this work directive shall be based on the following criteria:

The Contractor shall deliver four hard copies and 1 electronic copy (in Micro Soft Word) of the final version of the Operator's POI and Lesson Plan, and four hard copies and 1 electronic copy (in Micro Soft Word) of the final version of the Maintenance POI and Lesson Plan.

The hard copies and electronic copy of the POIs and Lesson Plans shall be packaged and delivered to ensure safe delivery to the destination. The electronic copies shall be free of viruses.

Delivery of the final versions shall be FOB destination 30 days after receipt of Government's review of the rough drafts.

The rough draft and final versions of the POIs and Lesson Plans shall be delivered to:

U.S. Army Tank-Automotive and Armaments Command

6501 E. 11 Mile Rd.

Building 229

Program Managers Office Light Armored Vehicles (PMO LAV)

SFAE-GCS-LAV-M (Mail Stop 501) Attn: James Van Coillie Warren, MI 48397-5000

\* Added by Modification P00012

DIRECT LABOR:		
CATEGORY:	HOURS:	COST:
Training	607	\$57,865.30
OTHER DIRECT COSTS: CATEGORY: TRAVEL MATERIAL		COST: 0 \$500.00
TOTAL AMOUNT OF WORK DIRECTIVE:	\$58,365.30	
CONTRACTING OFFICER/s/ Michael T. Finnell_	DATE4 Sep 02	
CONTRACTOR DATE _		

#### SYSTEM TECHNICAL SUPPORT WORK DIRECTIVE NUMBER 011

STOP	WORK	ON	THIS	WORK	DIRECTIVE	PURSUA	ANT TO	O FAR	52.242-15	ALT I	, PER	PCO	LETTER	R DATED	DECE	MBER	19,	2002	AND N	MODIF:	ICAT	ION P00012		N
i	ŧ																							
FURT	THER V	WORK	SHA	ALL B	E PERFORMED	UNDER	THIS	WORK	DIRECTIVE	, UNTI	L NOT	IFIED	IN WF	RITING	BY TH	E CO	NRAC'	ring	OFFICE	R TO	DO	OTHERWISE.	*	

CONTRACT NO. : DAAE07-00-C-MO64

DATE: See date at Contracting Officers Signature

SUBJECT: LAV-AD Engineering Baseline Study

SCOPE OF WORK:

This Work Directive shall be performed IAW CLIN 0005AA.

An Engineering Baseline Study shall be performed to increase the GDLS Engineering knowledge base of the LAV-AD system establishing the foundation and technology base needed to support LAV-AD Program. The study shall develop an Engineering baseline of turret performance for static and dynamic operating conditions. Information on power distribution, system control, fire control, electric drive, system logic and software shall be evaluated and documented. The current LAV-AD Technical Data Package (TDP), LAV-AD Technical Manuals (TMs) and the LAV-AD vehicle shall be used to facilitate this baseline study.

Successful completion of this work directive is that the contractor shall produce an Engineering Reference binder on the LAV-AD that will be the technical source to assist in future Engineering efforts. A copy of this comprehensive point of reference shall be provided as a deliverable to TACOM, prepared in the contractors format. The contractor shall supply two copies, one on cd and one hard copy. The electronic copy shall be in a Microsoft file that is readable by the Government and free of viruses.

The Engineering Reference binder and CD shall be delivered NLT 28 November 2002. The binder and CD shall be packaged to ensure safe delivery to the following address:

Attn: James Van Coillie U.S Army Tank-Automotive & Armaments Command SFAE-GCS-LV-M (Mail Stop 501) 6501 E. 11 Mile Rd. Warren Mich. 48397-5000

DIRECT LABOR:		
CATEGORY	HOURS:	COST:
ENGINEERING STUDY	567 *	\$54,052.10
TRAVEL	0	
MATERIAL	-	\$ 2,000.00
TOTAL AMOUNT OF WORK DIRECTIVE:		\$56,052.10
CONTRACTING OFFICER		DATE
CONTRACTOR	DATE	

PIIN/SIIN DAAE07-00-C-M064
MOD/AMD P00013

ATT/EXH ID

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 $\star$  Changed by modification P00013

## SYSTEM TECHNICAL SUPPORT WORK DIRECTIVE NUMBER 012

STOP WORE	ON	THIS	WORK	DIRECTIVE	PURSU	ANT T	O FAR	52.242-	15 <i>I</i>	ALT I,	PER P	CO	LETTER	DATED	DECEN	MBER	19,	2002	AND	MOD	IFICA	ATION	P0001	2.	NO
*	MODE	CU7	ידי סי	E PERFORMEI	ם בוואור בים	титс	י שורטע	חדטבייידי	77E'	TINTTT	NOTE	חיםדי	TN WD	TTINC	DV TUE	r con	יים א פיד	TNC (	∩₽₽T <i>C</i>	י סשר	ת היי	) OTTU	PDWICE	*	
PORTIER	WORL	. DIII	700 01	E FERFORMEL	ONDER	11110	WORK	DIRECTI	V L ,	ONIIL	NOTIF	TED	III WIC.	IIING .	D1 1111	2 CON	VICAC I	ING V	OFFIC	2111	10 00	, 0111	EKWIDE		
CONTRACT	NO.	:	DAAE	07-00-C-MO6	54																				
DATE: See	dat	e at	Conti	racting Off	icers	Signa	ture																		

SCOPE OF WORK:

This Work Directive shall be performed IAW CLIN 0006AA.

SUBJECT: LAV-AD Convert Technical Drawings to ECards System

For the purposes of facilitating functional use of the LAV-AD TDP the Contractor shall load the released LAV-AD technical drawings, parts lists, and specifications into the GDLS ECards system. This shall simplify the support and sustainment of the LAV-AD program by providing appointed employees across the General Dynamics Land Systems (GDLS) division access to important technical and manufacturing data, most importantly for addressing spares solicitations, performing procurement activities, and conducting various Configuration Management and Engineering activities.

Successful completion of this Work Directive shall be based on a formal demonstration, to a PM LAV Representative, of the final version of the electronic ECards System 60 days after award of this Work Directive. The Contractor shall contact PM LAV NLT 2 weeks prior to the demonstration to determine a mutually agreed to date.

DIRECT LABOR:
CATEGORY: HOURS: COST:
ENGINEERING/CM 230 \$21,925.90

TOTAL AMOUNT OF WORK DIRECTIVE: \$21,925.90

CONTRACTING OFFICER \_/s/ Michael T. Finnell \_\_\_\_\_ DATE \_\_4 Sep 02\_\_\_\_\_

CONTRACTOR \_\_\_\_\_ DATE \_\_\_\_\_

\* Added by Modification P00012

## SYSTEM TECHNICAL SUPPORT WORK DIRECTIVE NUMBER 012, Amendment 1

STOP WORK ON THIS WORK DIRECTIVE PURSUANT TO FAR 52.242-15 ALT I, PER PCO LETTER DATED DECEMBER 19, 2002 AND MODIFICATION P00012. FURTHER WORK SHALL BE PERFORMED UNDER THIS WORK DIRECTIVE, UNTIL NOTIFIED IN WRITING BY THE CONRACTING OFFICER TO DO OTHERWISE. CONTRACT NO. : DAAE07-00-C-M064 DATE: See date at Contracting Officers Signature SUBJECT: LAV-AD Convert Technical Drawings to ECards System SCOPE OF WORK: This Work Directive shall be performed IAW CLIN 0005AA and in addition to the scope under Work Directive 012. For the purposes of facilitating functional use of the LAV-AD TDP the Contractor shall load the released LAV-AD technical drawings, parts lists, and specifications into the GDLS ECards system. This shall simplify the support and sustainment of the LAV-AD program by providing appointed employees across the General Dynamics Land Systems (GDLS) division access to important technical and manufacturing data, most importantly for addressing spares solicitations, performing procurement activities, and conducting various Configuration Management and Engineering activities. Successful completion of this Work Directive shall be based on a formal demonstration, to a PM LAV Representative, of the final version of the electronic ECards System 60 days after award of this Work Directive. The Contractor shall contact PM LAV NLT 2 weeks prior to the demonstration to determine a mutually agreed to date. DIRECT LABOR: CATEGORY: HOURS: COST: ENGINEERING/CM \$ 3,145.89 TOTAL AMOUNT OF WORK DIRECTIVE: \$ 3,145.89

\_\_ DATE \_\_\_\_

\_\_\_\_\_ DATE \_\_

CONTRACTING OFFICER \_

CONTRACTOR

<sup>\*</sup> WD 012, Amd 1 is added by Modification P00013

### SYSTEM TECHNICAL SUPPORT WORK DIRECTIVE NUMBER 013

STOP WORK ON THIS WORK DIRECTIVE PURSUANT TO FAR 52.242-15 ALT I, PER PCO LETTER DATED DECEMBER 19, 2002 AND MODIFICATION P00012. \*

NO FURTHER WORK SHALL BE PERFORMED UNDER THIS WORK DIRECTIVE, UNTIL NOTIFIED IN WRITING BY THE CONRACTING OFFICER TO DO \*

OTHERWISE.

\*

CONTRACT NO. : DAAE07-00-C-M064

DATE: See date at Contracting Officers Signature

SUBJECT: Design the Integration of the Light Armored Vehicle Air Defense (LAV-AD) Wind Speed Sensor

BACKGROUND: The current Wind Speed Sensor, part number DAA0253-0003, that is used on the LAV-AD has been discontinued by the original manufacturer; J-Tech. J-Tech has developed a new Wind Speed Sensor, part number DAA0253-0004, that is a replacement for the discontinued Wind Speed Sensor. The new Wind Speed Sensor has a different pin connector and the supply voltage has been changed from 24 volts to 15 volts.

#### SCOPE OF WORK:

- A. The Government will supply, as Government Furnished Equipment (GFE), a quantity of 1 each new Wind Speed Sensor (P/N DAA0253-0004) to the Contractor for the purpose of developing the most cost effective integration of the new Wind Speed Sensor into a LAV-AD Fire Control System. The performance of the new Wind Speed Sensor shall be equivalent to, or exceed, the requirements of the original Wind Speed Sensor (DAA0253-003).
- B. The Contractor shall conduct a start of work meeting at their facility within 30days after award of this work directive. The focus of the meeting shall be to review the characteristics of the LAV-AD Fire Control System, Wind Speed Sensor, and GDLS-CSSC's plans for integrating the two.
- C. The Contractor shall use the loaned LAV-AD vehicle as the test vehicle. Once the test of the new integrated Wind Speed Sensor is complete, the Contractor shall remove the new integrated Wind Sensor and place the original Wind Sensor back on the Vehicle, so that the Vehicle remains in the same condition as received.
- D. The Contractor shall perform all Developmental Testing that shall verify Form, Fit, and Function of the new Wind Sensor and that it shall not degregate the performance of the LAV-AD.
- E. The Contractor shall have 180 days after award of this contract to complete this work directive. If the Contractor can not complete any of the tasks within the described time lines, the Contractor shall notify the Procuring Contracting Officer two weeks before each deadline the contractor anticipates missing.
- F. Successful completion of this work directive shall be based on the following:

a. Analysis Report				
b. Test Reports				
c. An Engineering Change Proposal that wi	ll include drawings (suitab	ole for cataloging) and	d modification instructions.	
d. Technical Data Package suitable for co	mpetition.			
3. The Contractor shall submit one (1) co Government software and free of viruses.	py of all the documents in	ı paragraph F in an ele	ectronic format that is compati	.ble with
4. All the documents shall be delivered t	o:			
U.S. Army Tank-Automotive & Armaments Com 6501 E. 11 Mile Rd. Program Managers Office Light Armored Veh SFAE-GCS-LAV-M (Mail Stop 501) Att: James Van Coillie Warren, Mich. 48397-5000				
DIRECT LABOR: CATEGORY	HOURS:		COST:	
Engineering	61		\$5,815.13	
OTHER DIRECT COSTS: CATEGORY: TRAVEL MATERIAL			0 0 —————	
TOTAL AMOUNT OF WORK DIRECTIVE:		\$5,815.13		
CONTRACTING OFFICER _/s/ Michael T. Finne	.11 DATE4 Sep 02	_		
CONTRACTOR	DATE			
*Added by Modification P00012				

1. The Contractor shall successfully complete all Form, Fit and Function testing.

2. The Contractor shall deliver the following documents: